

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with HABAYlated avidins; ***avidin*** derivs.
conjugated with 4'-hydroxyazobenzene-2-carboxylic acids and uses
thereof)

IT 58-85-5, ***Biotin***

RL: ARG (Analytical reagent use); BPR (Biological process); BSU
(Biological study, unclassified); BUU (Biological use, unclassified); NUU
(Other use, unclassified); ANST (Analytical study); BIOL (Biological
study); PROC (Process); USES (Uses)
(technol. using ***avidin*** and; ***avidin*** derivs.
conjugated with 4'-hydroxyazobenzene-2-carboxylic acids and uses
thereof)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

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- (2) Ebersole, R; US 5182203 A 1993 CA NO good.
- *(3) Green, N; METHODS IN ENZYMOLOGY 1990, V184, P51 CA
- *(4) Morpurgo; JOURNAL OF THE AMERICAN CHEMICAL SOCIETY 1998, V120(49), P12734
CA
- *(5) Touin, G; JP 08012699 A 1996 CA
- (6) Yeda Res & Dev; WO 9700329 A 1997 CA ✓

L5 ANSWER 6 OF 9 CA COPYRIGHT 2004 ACS on STN

AN 129:160758 CA

ED Entered STN: 19 Sep 1998

TI Separation of immunoglobulin G from Cheddar cheese whey by ***avidin***
-biotinylated IgY chromatography

AU Kim, H.; Li-Chan, E. C. Y.

CS Dept. of Food Science, Univ. of British Columbia, Vancouver, BC, V6T 1Z4,
Can.

SO Journal of Food Science (1998), 63(3), 429-434

908 226 8200

CODEN: JFDSA; ISSN: 0022-1147

PB Institute of Food Technologists

09/995304 x203

DT Journal

LA English

CC 17-1 (Food and Feed Chemistry)

AB High-purity Igs, which may be useful for immunol. supplementation of food
products, were isolated from Cheddar cheese whey in a single-step process
using ***avidin*** -biotinylated yolk Ig (IgY) column chromatog. Yolk
antibodies specific to bovine IgG (IgYIgG) were biotinylated with
biotinyl amidohehexanoic acid-N-hydroxysulfosuccinimide ester without any
notable effect on the antigen binding activity, and coupled to
immobilized ***avidin*** columns. The resulting
avidin -biotinylated IgYIgG columns, with binding capacity of
50-55% (wt./wt. percent ratio of IgG to ***immobilized*** IgYIgG),
were used for the specific binding of IgG from cheese whey. Elution with
a com. available eluent (Actisep) or 0.1 M glycine HCl buffer at pH 2.8
yielded IgG with purity of 99% as detd. by radial immunodiffusion.

ST whey Ig isolation ***avidin*** ***biotin*** chromatog

IT Immunoglobulins

RL: ANT (Analyte); PUR (Purification or recovery); ANST (Analytical
study); PREP (Preparation)

(G; IgG sepn. from Cheddar cheese whey by ***avidin*** -biotinylated
yolk Ig chromatog.)

IT ***Affinity*** ***chromatography***

Whey

(IgG sepn. from Cheddar cheese whey by ***avidin*** -biotinylated
yolk Ig chromatog.)

RE.CNT 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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- (2) Akita, E; J Dairy Sci 1998, V81, P54 CA
- (3) Akita, E; J Food Sci 1992, V57, P629 CA

- (4) Al-Mashikhi, S; J Dairy Sci 1988, V71, P1747 CA
- (5) Bayer, E; Egg Uses and Processing Technologies New Developments 1994, P158 CA
- (6) Bayer, E; FEBS Lett 1976, V68, P240 CA
- (7) Bayer, E; Methods in Enzymology 1990, V184, P138 CA
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- (26) Li-Chan, E; J Dairy Sci 1997, V80, P1038 CA
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L5 ANSWER 7 OF 9 CA COPYRIGHT 2004 ACS on STN
AN 127:328674 CA
ED Entered STN: 09 Dec 1997
TI Streptavidin and ***avidin*** mutants with decreased affinity for
biotin and their use in reducing background noise in assays
IN Kopetzki, Eberhard; Muller, Rainer; Engh, Richard; Schmitt, Urban; Deger,
Arno; Brandstetter, Hans
PA Boehringer Mannheim G.m.b.H., Germany ✓
SO Eur. Pat. Appl., 27 pp.
CODEN: EPXXDW
DT Patent
LA German
IC ICM C12N015-12
ICS C12N015-31; C07K014-36; C07K014-465; G01N033-53
CC 9-2 (Biochemical Methods)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 799890	A2	19971008	EP 1997-105408	19970401
	EP 799890	A3	19991222		
	R: DE, ES, FR, IT				
	DE 19637718	A1	19971002	DE 1996-19637718	19960916
	JP 10028589	A2	19980203	JP 1997-79632	19970331
	JP 3097905	B2	20001010		
	US 6312916	B1	20011106	US 1997-831399	19970401
	US 6391571	B1	20020521	US 1999-366862	19990804
	US 6417331	B1	20020709	US 1999-368772	19990805
PRAI	DE 1996-19613053	A	19960401		
	DE 1996-19637718	A	19960916		
	US 1997-831399	A3	19970401		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	EP 799890	ICM	C12N015-12
		ICS	C12N015-31; C07K014-36; C07K014-465; G01N033-53
AB	<p>The title streptavidin and ***avidin*** mutants have affinities for ***biotin*** of <1010 L/mol. These mutants may be included in assays which depend upon streptavidin/ ***avidin*** - ***biotin*** interactions to reduce nonspecific binding of assay components to the streptavidin or ***avidin***. Thus, many sequence variants of core streptavidin were prep'd. and tested for ***biotin*** binding. Affinities of 7.7×10^6 - 3.6×10^8 were obsd. Decrease in noise in a sandwich immunoassay for anti-hepatitis C virus ***antibodies***, in which a streptavidin-coated solid phase and a biotinylated viral peptide were employed, was demonstrated. Addnl., use of ***immobilized*** streptavidin mutant for affinity chromatog. of biotinylated BSA and biotinylated Fab fragments was shown.</p>		
ST	streptavidin ***avidin*** mutant ***biotin*** affinity; noise		
IT	suppression assay streptavidin ***avidin*** ***biotin***		
	Immunoglobulins		
	RL: PUR (Purification or recovery); PREP (Preparation)		
	(Fab fragment, biotinylated; streptavidin and ***avidin*** mutants with decreased affinity for ***biotin*** and their use in reducing background noise in assays)		
IT	Cell		
	(expression host; streptavidin and ***avidin*** mutants with decreased affinity for ***biotin*** and their use in reducing background noise in assays)		
IT	Avidins		
	RL: ARU (Analytical role, unclassified); BPN (Biosynthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)		
	(mutants; streptavidin and ***avidin*** mutants with decreased affinity for ***biotin*** and their use in reducing background noise in assays)		
IT	Protein sequences		
	(of streptavidin mutants with reduced affinity for ***biotin***)		
IT	Plasmids		
	(pSA-Leu25Trp/Ser45Trp/Leu110Trp; streptavidin and ***avidin*** mutants with decreased affinity for ***biotin*** and their use in reducing background noise in assays)		
IT	Plasmids		
	(pSA-Leu25Trp/Ser45Tyr/Leu110Trp; streptavidin and ***avidin*** mutants with decreased affinity for ***biotin*** and their use in reducing background noise in assays)		
IT	Plasmids		
	(pSA-Leu25Trp; streptavidin and ***avidin*** mutants with decreased affinity for ***biotin*** and their use in reducing background noise in assays)		
IT	Plasmids		

. (pSA-Leu27Arg/Ser45Arg/Leu110Trp; streptavidin and ***avidin*** mutants with decreased affinity for ***biotin*** and their use in reducing background noise in assays)

IT Plasmids (pSA-Leu27Arg/Ser45Arg/Tyr120Ala; streptavidin and ***avidin*** mutants with decreased affinity for ***biotin*** and their use in reducing background noise in assays)

IT Plasmids (pSA-Ser27Arg/Ser45Arg; streptavidin and ***avidin*** mutants with decreased affinity for ***biotin*** and their use in reducing background noise in assays)

IT Plasmids (pSA-Ser27Arg; streptavidin and ***avidin*** mutants with decreased affinity for ***biotin*** and their use in reducing background noise in assays)

IT Plasmids (pSA-Ser45Arg; streptavidin and ***avidin*** mutants with decreased affinity for ***biotin*** and their use in reducing background noise in assays)

IT Plasmids (pSA-Ser45Trp/Leu110Trp; streptavidin and ***avidin*** mutants with decreased affinity for ***biotin*** and their use in reducing background noise in assays)

IT Plasmids (pSA-Ser45Tyr/Leu110Trp; streptavidin and ***avidin*** mutants with decreased affinity for ***biotin*** and their use in reducing background noise in assays)

IT Plasmids (pSA-Trp120Ala; streptavidin and ***avidin*** mutants with decreased affinity for ***biotin*** and their use in reducing background noise in assays)

IT Immunoassay (sandwich; streptavidin and ***avidin*** mutants with decreased affinity for ***biotin*** and their use in reducing background noise in assays)

IT Albumins, preparation
RL: PUR (Purification or recovery); PREP (Preparation)
(serum, biotinylated; streptavidin and ***avidin*** mutants with decreased affinity for ***biotin*** and their use in reducing background noise in assays)

IT ***Affinity*** ***chromatography***
(streptavidin and ***avidin*** mutants with decreased affinity for ***biotin*** and their use in reducing background noise in assays)

IT Nucleic acids
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(streptavidin and ***avidin*** mutants-encoding; streptavidin and ***avidin*** mutants with decreased affinity for ***biotin*** and their use in reducing background noise in assays)

IT 150679-71-3DP, 13-139-Streptavidin [methionyl] (Streptomyces avidinii), mutants
RL: ARU (Analytical role, unclassified); BPN (Biosynthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(amino acid sequence; streptavidin and ***avidin*** mutants with decreased affinity for ***biotin*** and their use in reducing background noise in assays)

IT 197810-40-5P 197810-41-6P 197810-42-7P 197810-43-8P 197810-44-9P
197810-45-0P 197810-46-1P 197810-47-2P 197810-48-3P 197810-49-4P
197810-50-7P 197810-51-8P
RL: ARU (Analytical role, unclassified); BPN (Biosynthetic preparation); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)
(amino acid sequence; streptavidin and ***avidin*** mutants with

decreased affinity for ***biotin*** and their use in reducing background noise in assays)

IT 9013-20-1DP, Streptavidin, mutants

RL: ARU (Analytical role, unclassified); BPN (Biosynthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation)

(streptavidin and ***avidin*** mutants with decreased affinity for ***biotin*** and their use in reducing background noise in assays)

IT 58-85-5, ***Biotin***

RL: ARU (Analytical role, unclassified); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)

(streptavidin and ***avidin*** mutants with decreased affinity for ***biotin*** and their use in reducing background noise in assays)

L5 ANSWER 8 OF 9 CA COPYRIGHT 2004 ACS on STN

AN 124:307894 CA

ED Entered STN: 29 May 1996

TI ***Biotin*** -labeled and photoactivatable aldosterone and progesterone derivatives as ligands for ***affinity*** ***chromatography***, fluorescence immunoassays and photoaffinity labeling

AU Eisen, Christoph; Meyer, Christiane; Dressendoerfer, Regina; Strasburger, Christian; Decker, Heinz; Wehling, Martin

CS Medizinische Klinik, University Munich, Germany

SO European Journal of Biochemistry (1996), 237(2), 514-18

CODEN: EJBCAI; ISSN: 0014-2956

PB Springer

DT Journal

LA English

CC 2-4 (Mammalian Hormones)

AB New derivs. of progesterone and aldosterone were synthesized and functionally tested with com. available ***antibodies***. The covalent labeling of ***antibodies*** specific for aldosterone and progesterone was detected by SDS-PAGE anal. and subsequent autoradiog. after using 3-(O-carboxymethyl)oximino-(3-[125I]iodo-4-azidosalicylamidobutylamine) derivs. of aldosterone and progesterone, resp., as photoactivatable radioligands. Labeling was not obsd. in the presence of an excess of the unlabeled steroid. Aldosterone was labeled with ***biotin*** and used as a tracer in a time-resolved fluorescence immunoassay. The nonradioactive tracer is highly selective for its ***antibody***-binding site, with almost no detectable cross-reactivity for other steroids. ***Biotin***-labeled progesterone was ***immobilized*** by ***avidin***-agarose and used for affinity chromatog. This yielded a more than 20-fold enrichment of an anti-progesterone polyclonal ***antibody***. These results demonstrate that derivs. of steroids are particularly useful for the development of nonradioactive assays for the detn. of natural steroids and may be also useful for the detection of specific binding sites in biol. material such as plasma membranes.

ST aldosterone progesterone photoactivatable deriv photoaffinity labeling

IT Photoaffinity labeling

(***biotin*** -labeled and photoactivatable aldosterone and progesterone derivs. as ligands for affinity chromatog., fluorescence immunoassays and photoaffinity labeling)

IT Immunoassay

(fluorescence, ***biotin*** -labeled and photoactivatable aldosterone and progesterone derivs. as ligands for affinity chromatog., fluorescence immunoassays and photoaffinity labeling)

IT 52-39-1, Aldosterone 57-83-0, Progesterone, analysis

RL: ANT (Analyte); ANST (Analytical study)

(***biotin*** -labeled and photoactivatable aldosterone and progesterone derivs. as ligands for affinity chromatog., fluorescence immunoassays and photoaffinity labeling)

IT 176049-68-6P 176049-69-7P 176049-71-1P 176049-72-2P

RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST

(Analytical study); PREP (Preparation); USES (Uses)
 (***biotin*** -labeled and photoactivatable aldosterone and progesterone derivs. as ligands for affinity chromatog., fluorescence immunoassays and photoaffinity labeling)

IT 68-12-2, N,N-Dimethylformamide, reactions 538-75-0, N,N'-Dicyclohexylcarbodiimide 6066-82-6, N-Hydroxysuccinimide 109276-34-8, Biotinamidocaproylhydrazide 176049-73-3, 4-(p-Azidosalicylamido)butylamine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (***biotin*** -labeled and photoactivatable aldosterone and progesterone derivs. as ligands for affinity chromatog., fluorescence immunoassays and photoaffinity labeling)

IT 50909-89-2P, Progesterone-3-(o-carboxymethyloxime) 55482-95-6P, Aldosterone-3-(o-carboxymethyloxime)
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (***biotin*** -labeled and photoactivatable aldosterone and progesterone derivs. as ligands for affinity chromatog., fluorescence immunoassays and photoaffinity labeling)

IT 105532-89-6P 176049-70-0P 176049-74-4P 176049-75-5P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (***biotin*** -labeled and photoactivatable aldosterone and progesterone derivs. as ligands for affinity chromatog., fluorescence immunoassays and photoaffinity labeling)

L5 ANSWER 9 OF 9 CA COPYRIGHT 2004 ACS on STN
 AN 115:45350 CA
 ED Entered STN: 10 Aug 1991
 TI ***Avidin*** column as a highly efficient and stable alternative for ***immobilization*** of ligands for ***affinity*** ***chromatography***

AU Bayer, Edward A.; Wilchek, Meir
 CS Dep. Biophys., Weizmann Inst. Sci., Rehovot, 76100, Israel
 SO Journal of Molecular Recognition (1990), 3(3), 102-7
 CODEN: JMORE4; ISSN: 0952-3499

DT Journal
 LA English
 CC 9-3 (Biochemical Methods)
 AB The ***avidin*** / ***biotin*** system was applied as a general mediator in the adsorption/desorption or ***immobilization*** of biol. active macromols. to solid supports. In this context, model biotinylated proteins (lectins and ***antibodies***) were attached to ***avidin*** -coupled Sepharose. As examples for affinity chromatog., peanut agglutinin and anti-transferrin ***antibody*** were used to isolate asialofetuin and transferrin, resp. The capacity and product yields were significantly better than those achieved with conventional affinity chromatog. on CNBr-activated Sepharose columns contg. the same lectin or ***antibody*** . Moreover, the columns were characterized by improved stability properties exhibiting remarkably low levels of leakage.

ST affinity chromatog ***avidin*** column ligand ***immobilization***
 ; biotinylated protein ***immobilization*** affinity chromatog

IT ***Immobilization*** , biochemical
 (of biotinylated ***antibodies*** and lectins, on ***avidin*** /Sepharose column, for affinity chromatog.)

IT Antigens
 Glycoproteins, preparation
 Transferrins
 RL: PUR (Purification or recovery); PREP (Preparation)
 (purifn. of, by affinity chromatog. with ***immobilized*** ligands on ***avidin*** column)

IT Agglutinins and Lectins
 Antibodies
 RL: ANST (Analytical study)

(reaction products with ***biotin*** , ***immobilization*** of,
on ***avidin*** -coupled Sepharose affinity column)
IT Chromatography, column and liquid
(affinity, for antigen and glycoprotein purifn., with
immobilized biotinylated ligands)
IT Chromatography, column and liquid
(affinity, stationary phases, ***avidin*** -coupled Sepharose as,
for glycoprotein and antigen purifn., ***immobilized***
biotinylated ligands in)
IT Fetuins
RL: PUR (Purification or recovery); PREP (Preparation)
(asialo-, purifn. of, by affinity chromatog. with ***immobilized***
ligands on ***avidin*** column)
IT Avidins
RL: ANST (Analytical study)
(reaction products, with Sepharose, biotinylated proteins
immobilization on, for affinity chromatog.)
IT 9012-36-6D, Sepharose, reaction products with ***avidin***
RL: ANST (Analytical study)
(biotinylated proteins ***immobilization*** on, for affinity
chromatog.)
IT 66640-86-6, ***Biotin*** hydrazide 134778-27-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with ***antibodies***)
IT 35013-72-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with lectin or ***antibodies***)

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COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
157.72	157.93

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-48.84	-48.84

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STN INTERNATIONAL LOGOFF AT 16:50:56 ON 16 NOV 2004